

**ATTACHMENT A**  
**Clean version of the changes to the Specification &  
Clean version of all pending claims**

**IN THE SPECIFICATION:**

**The following new paragraph has been inserted at page 1, prior to the paragraph titled  
“Field of the Invention:”**

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**Related Applications**

This application claims priority from U.S. Provisional Application Serial No. 60/153,222, filed 13-Sep-1999, entitled “SYSTEM AND METHOD FOR THE CREATION AND AUTOMATIC DEPLOYMENT OF PERSONALIZED, DYNAMIC AND INTERACTIVE VOICE SERVICES.”

This application is also related by subject matter to the following U.S. Patent Applications: U.S. Application Serial No. 09/454,602, filed 07-Dec-1999, entitled “SYSTEM AND METHOD FOR THE CREATION AND AUTOMATIC DEPLOYMENT OF PERSONALIZED, DYNAMIC AND INTERACTIVE VOICE SERVICES;” U.S. Application Serial No. 10/073,331, filed 13-Feb-2002, entitled “SYSTEM AND METHOD FOR THE CREATION AND AUTOMATIC DEPLOYMENT OF PERSONALIZED, DYNAMIC AND INTERACTIVE VOICE SERVICES, WITH CLOSED LOOP TRANSACTION PROCESSING,” which is a continuation of U.S. Application Serial No. 09/455,525, filed 07-Dec-1999, entitled “SYSTEM AND METHOD FOR THE CREATION

AND AUTOMATIC DEPLOYMENT OF PERSONALIZED, DYNAMIC AND INTERACTIVE VOICE SERVICES, WITH CLOSED LOOP TRANSACTION PROCESSING," now abandoned; U.S. Application Serial No. 09/455,533, filed 07-Dec-1999, entitled SYSTEM AND METHOD FOR THE CREATION AND AUTOMATIC DEPLOYMENT OF PERSONALIZED, DYNAMIC AND INTERACTIVE VOICE SERVICES WITH REAL-TIME DATABASE QUERIES;" U.S. Application Serial No. 09/455,529, filed 07-Dec-1999, entitled "SYSTEM AND METHOD FOR THE CREATION AND AUTOMATIC DEPLOYMENT OF PERSONALIZED, DYNAMIC AND INTERACTIVE VOICE SERVICES WITH REAL-TIME DRILLING VIA TELEPHONE;" U.S. Application Serial No. 09/661,188, filed 13-Sep-2000, entitled "SYSTEM AND METHOD FOR THE CREATION AND AUTOMATIC DEPLOYMENT OF PERSONALIZED, DYNAMIC AND INTERACTIVE VOICE SERVICES INCLUDING MODULE FOR GENERATING AND FORMATTING VOICE SERVICES;" U.S. Application Serial No. 10/072,898, filed 12-Feb-2002, entitled "SYSTEM AND METHOD FOR THE CREATION AND AUTOMATIC DEPLOYMENT OF PERSONALIZED, DYNAMIC AND INTERACTIVE VOICE SERVICES WITH CUSTOMIZED MESSAGE DEPENDING ON RECIPIENT," which is a continuation of U.S. Application Serial No. 09/455,527, filed 07-Dec-1999, entitled "SYSTEM AND METHOD FOR THE CREATION AND AUTOMATIC DEPLOYMENT OF PERSONALIZED, DYNAMIC AND INTERACTIVE VOICE SERVICES WITH CUSTOMIZED MESSAGE DEPENDING ON RECIPIENT;" U.S. Application Serial No. 09/661,377, filed 13-Sep-2000, entitled "SYSTEM AND METHOD FOR CREATING VOICE SERVICES FOR

INTERACTIVE VOICE BROADCASTING;" U.S. Application Serial No. 09/661,375, filed 13-Sep-2000, entitled "SYSTEM AND METHOD FOR THE CREATION AND AUTOMATIC DEPLOYMENT OF PERSONALIZED, DYNAMIC AND INTERACTIVE VOICE SERVICES, WITH SYSTEM AND METHOD THAT ENABLE ON-THE-FLY CONTENT AND SPEECH GENERATION;" U.S. Application Serial No. 09/496,357, filed 02-Feb-2000, entitled "SYSTEM AND METHOD FOR PERSONALIZING INTERACTIVE VOICE BROADCASTS;" U.S. Application Serial No. 09/661,471, filed 13-Sep-2000, entitled "SYSTEM AND METHOD FOR THE CREATION AND AUTOMATIC DEPLOYMENT OF PERSONALIZED, DYNAMIC AND INTERACTIVE VOICE SERVICES INCLUDING A MARKUP LANGUAGE FOR CREATING VOICE SERVICES;" U.S. Application Serial No. 09/454,604, filed 07-Dec-1999, entitled "SYSTEM AND METHOD FOR VOICE SERVICE BUREAU," now U.S. Patent No. 6,263,051, issued 17-Jul-2001; U.S. Application Serial No. 09/496,356, filed 02-Feb-2000, entitled "SYSTEM AND METHOD FOR THE CREATION AND AUTOMATIC DEPLOYMENT OF PERSONALIZED, DYNAMIC AND INTERACTIVE VOICE SERVICES, WITH TELEPHONE-BASED SERVICE UTILIZATION AND CONTROL;" U.S. Application Serial No. 09/455,523, filed 07-Dec-1999, entitled "SYSTEM AND METHOD FOR REAL-TIME, PERSONALIZED, DYNAMIC, INTERACTIVE VOICE SERVICES FOR INFORMATION RELATED TO EXISTING TRAVEL SCHEDULE;" U.S. Application Serial No. 09/454,601, filed 07-Dec-1999, entitled "SYSTEM AND METHOD FOR REAL-TIME, PERSONALIZED, DYNAMIC, INTERACTIVE VOICE SERVICES FOR INVENTORY-RELATED INFORMATION;" U.S. Application Serial No. 09/454,597, filed

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07-Dec-1999, entitled "SYSTEM AND METHOD FOR REAL-TIME, PERSONALIZED, DYNAMIC, INTERACTIVE VOICE SERVICES FOR CORPORATE-ANALYSIS RELATED INFORMATION;" U.S. Application Serial No. 09/455,524, filed 07-Dec-1999, entitled "SYSTEM AND METHOD FOR REAL-TIME, PERSONALIZED, DYNAMIC, INTERACTIVE VOICE SERVICES FOR INVESTMENT-RELATED INFORMATION;" U.S. Application Serial No. 09/454,603, filed 07-Dec-1999, entitled "SYSTEM AND METHOD FOR REAL-TIME, PERSONALIZED, DYNAMIC, INTERACTIVE VOICE SERVICES FOR ENTERTAINMENT-RELATED INFORMATION;" U.S. Application Serial No. 09/455,532, filed 07-Dec-1999, entitled "SYSTEM AND METHOD FOR REAL-TIME, PERSONALIZED, DYNAMIC, INTERACTIVE VOICE SERVICES FOR PROPERTY-RELATED INFORMATION;" U.S. Application Serial No. 09/454,599, filed 07-Dec-1999, entitled "SYSTEM AND METHOD FOR REAL-TIME, PERSONALIZED, DYNAMIC, INTERACTIVE VOICE SERVICES FOR RETAIL-RELATED INFORMATION;" U.S. Application Serial No. 09/455,530, filed 07-Dec-1999, entitled "SYSTEM AND METHOD FOR REAL-TIME, PERSONALIZED, DYNAMIC, INTERACTIVE VOICE SERVICES FOR BOOK-RELATED INFORMATION;" U.S. Application Serial No. 09/455,526, filed 07-Dec-1999, entitled "SYSTEM AND METHOD FOR REAL-TIME, PERSONALIZED DYNAMIC, INTERACTIVE VOICE SERVICES FOR TRAVEL AVAILABILITY INFORMATION;" U.S. Application Serial No. 09/455,534, filed 07-Dec-1999, entitled "SYSTEM AND METHOD FOR THE CREATION AND AUTOMATIC DEPLOYMENT OF PERSONALIZED, DYNAMIC AND INTERACTIVE VOICE SERVICES, WITH INTEGRATED IN BOUND AND

OUTBOUND VOICE SERVICES;" U.S. Application Serial No. 09/496,425, filed 02-Feb-2000, entitled "SYSTEM AND METHOD FOR THE CREATION AND AUTOMATIC DEPLOYMENT OF PERSONALIZED, DYNAMIC AND INTERACTIVE VOICE SERVICES, WITH THE DIRECT DELIVERY OF VOICE SERVICES TO NETWORKED VOICE MESSAGING SYSTEMS;" U.S. Application Serial No. 09/454,598, filed 07-Dec-1999, entitled "SYSTEM AND METHOD FOR THE CREATION AND AUTOMATIC DEPLOYMENT OF PERSONALIZED, DYNAMIC AND INTERACTIVE VOICE SERVICES, INCLUDING DEPLOYMENT THROUGH DIGITAL SOUND FILES;" U.S. Application Serial No. 09/454,600, filed 07-Dec-1999, entitled "SYSTEM AND METHOD FOR THE CREATION AND AUTOMATIC DEPLOYMENT OF PERSONALIZED, DYNAMIC AND INTERACTIVE VOICE SERVICES, INCLUDING DEPLOYMENT THROUGH PERSONALIZED BROADCASTS;" and U.S. Application Serial No. 09/661,191, filed 13-Sep-2000, entitled "SYSTEM AND METHOD FOR THE CREATION AND AUTOMATIC DEPLOYMENT OF PERSONALIZED, DYNAMIC AND INTERACTIVE VOICE SERVICES, WITH REAL-TIME INTERACTIVE VOICE DATABASE QUERIES."

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**The paragraph beginning at page 7, line 14, has been rewritten as follows:**

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The invention in another regard may be adapted for use in more than one language, by substituting voice recognition and/or speech recognition modules tailored to other languages or dialects.

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**The paragraph beginning at page 18, line 12, has been rewritten as follows:**

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A3 In step 6012, the discriminator module 5006 determines the content of the recipient's voice input, such as "6072" in response to the PIN voice prompt. The call server 18 then processes the input so discriminated as in other embodiments described more fully below, to generate further information for delivery, receive further commands and complete the voice broadcast session. In step 6014, the recipient is authenticated according to the PIN or other information, and if validated processing proceeds to step 6018. If the recipient is not validated, control proceeds to step 6016 to test whether a predetermined number of attempts has been made. For example, a limit of three failed authentication attempts may be used. If that number is reached, control proceeds to step 6026 and processing ends. If not, control returns to step 6006 to re-prompt the subscriber.

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**The paragraph beginning at page 22, line 9, has been rewritten as follows:**

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A4 The method continues monitoring the scheduling condition for voice services until a scheduling condition is met. When a scheduling condition is met, that voice service is executed as illustrated in, for example, step 140. The execution of a voice service involves, inter alia, generating the content for the voice service, and structuring the voice service to be telecast through a call server. The execution of a voice service is explained in detail in conjunction with Figure 1c.

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**The paragraph beginning at page 26, line 8, has been rewritten as follows:**

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25 The PROMPT and OPTION elements may also be used to request user input using natural language. According to one embodiment, speech recognition technology is used to enable a user to respond to a PROMPT element or to select an OPTION element verbally by saying a number, e.g., "one.". The verbal response is recognized and used just as a keypress would be used. According to another embodiment, the user may provide a free form verbal input. For example, a PROMPT element may request that a user enter, e.g., the name of a business. In response the user speaks the name of a business. That spoken name is then resolved against predetermined standards to arrive at the input. Word spotting and slot filling may also be used in conjunction with such a PROMPT to determine the user input. For example, a PROMPT may request that the user speak a date and time, e.g., to choose an airline flight or to make a restaurant reservation. The user's spoken response may be resolved against known date and time formats to determine the input. According to another embodiment, a PROMPT is used to request input using natural language. For instance, in conjunction with a voice service to be used to make travel plans, instead of having separate PROMPT elements request input for flight arrival, departure dates and locations, a single natural language PROMPT may ask, "Please state your travel plan." In response, the user states "I'd like to go from Washington DC to New York city on the 3<sup>rd</sup> of January and return on the 3<sup>rd</sup> of February. This request would be processed using speech recognition and pattern matching technology to derive the user's input.

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**The paragraph beginning at page 28, line 3, has been rewritten as follows:**

A6  
A method for creating a voice service according to one embodiment will now be explained in conjunction with Figure 1b. The method begins in step 210 by naming the voice service. Then, in step 220 various scheduling parameters of the voice service are defined. In step 250 the service content is defined. And, in step 260, the personalization modes, or style properties are selected for the voice service.

**The paragraph beginning at page 29, line 17, has been rewritten as follows:**

A7  
In step 240, the schedule for the service is also selected. According to one embodiment, predefined schedules for voice services may be provided or a customized schedule for the voice service may be created. If a new schedule is to be created, a module may be opened to enable the schedule name and parameters to be set. Schedules may be run on a several-minute, hourly, daily, monthly, semi-annual, annual or other bases, depending upon what frequency is desired. According to one embodiment, an interface is provided that allows the administrator to browse through existing schedules and select an appropriate one. The interface may provide a browsing window for finding existing schedule files and a "new schedule" feature which initiates the schedule generating module. In one embodiment, schedules may not be set for alert type services. However, in some embodiments, a schedule for evaluating whether alert conditions have been met may be established in a similar manner.



**The paragraph beginning at page 30, line 6, has been rewritten as follows:**

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A8  
In step 230, the duration of the service is also set. Service duration indicates the starting and stopping dates for the service. Setting a service duration may be appropriate regardless of whether a scheduled service or alert type service has been selected. The start date is the base line for the scheduled calculation, while the end date indicates when the voice service will no longer be sent. The service may start immediately or at some later time. According to one embodiment, the interface is provided to allow the administrator to input start and end dates. The interface may also allow the administrator to indicate that the service should start immediately or run indefinitely. Various calendar features may be provided to facilitate selection of start and stop dates. For example, a calendar that specifies a date with pull-down menus that allow selection of a day, month and year may be provided according to known methods of selecting dates in such programs as electronic calendar programs and scheduling programs used in other software products. One specific aid that may be provided is to provide a calendar with a red circle indicating the present date and a blue ellipse around the current numerical date in each subsequent month to more easily allow the user to identify monthly intervals. Other methods may also be used.

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**The paragraph beginning at page 31, line 5, has been rewritten as follows:**

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A9  
In step 250, the content of the voice service is defined. Defining the content of the voice service may include selecting the speech to be delivered during the voice service broadcast (content), the structure of dialogs, menus, inputs, and the background procedures

which generate both content and structure. In one embodiment, defining voice service content establishes the procedures performed by the Voice Service Server (VSS) to assemble one or more active voice pages in response to initiation of the voice service. According to one embodiment, defining service content involves establishing a hierarchical structure of TML elements which define the structure and content of a voice service. All of the elements in a given service may be contained within a container.

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**The paragraph beginning at page 33, line 10, has been rewritten as follows:**

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A10  
Servers may have limited capacity to perform all of the actions required of them simultaneously, the method of Figure 1b comprises a step for prioritizing the execution and delivery of voice services. Prioritization may establish the order in which the voice service system allocates resources for processing voice service and delivering the IVB. According to one embodiment, assigning priority to a voice service establishes priority for queries to the database system, formatting the voice service, or IVBs. Any criteria may be used for establishing priority. According to one embodiment, priority is established based on service content. According to another embodiment, priority is based on service destination. According to another embodiment, priority may be established based on the type of voice service, *i.e.*, alert v. scheduled. Any number of procedures or criteria for denoting relative importance of service delivery may be established.

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**The paragraph beginning at page 35, line 9, has been rewritten as follows:**

A11  
After a call structure is generated, in step 330, it is sent to a call database *e.g.*, call database 1811 shown in Figure 3c along with the addresses and style properties of the users. The style properties govern the behavior of a call server 18 in various aspects of the dialog with a user. Call server 18 queries call database 1811 for current call requests and places new call requests in its queue.

**The paragraph beginning at page 36, line 18, has been rewritten as follows:**

A12  
Fig. 3a depicts an embodiment of a system according to one embodiment of the present invention. Preferably, the system comprises database system 12, a DSS server 14, voice server 16, a call server 18, subscription interface 20, and other out input/files 24.

**The paragraph beginning at page 44, line 3, has been rewritten as follows:**

A13  
A voice recognition module may be used to provide voice recognition functionality for call server 181. Voice recognition functionality may be used to identify the user at the beginning of a call to help ensure that voice services are not presented to an unauthorized user or to identify if a human or machine answers the call. This module may be a part of call builder 1813. This module may also incorporate speech recognition technology to recognize spoken input (say "one" instead of press "1"), enhanced command execution (user could say "transfer money from my checking to savings"), enhanced filtering (instead of typing stock symbols, a user would say "MSTR"), enhanced prompting, (saying numeral values).

**The paragraph beginning at page 45, line 10, has been rewritten as follows:**

A14  
Call server 18 also comprises certain hardware components 182. As shown in Figure 3c, hardware components 182 comprise processor 1821 and computer telephone module 1822. According to one embodiment, processor 1821 comprises a Pentium II processor, available from Intel, Inc. Module 1822 provides voice synthesis functionality that is used in conjunction with Text to Speech engine 1814 to communicate the content of voice services to a user. Module 1822 preferably comprises voice boards available from Dialogic, Inc. Other processors and voice synthesizers meeting system requirements may be used.

**The paragraph beginning at page 45, line 19, has been rewritten as follows:**

A15  
According to one embodiment of the present invention, a system and method that enable closed-loop transaction processing are provided. The method begins with the deployment of an IVB by executing a service. As detailed above, this includes generating the content and combining this with personalization information to create an active voice page. Call server 18 places a call to the user. During the call, information is delivered to the user through a voice-enabled terminal device (e.g., a telephone or cellular phone). Phone lines 183 may be used for communication purposes.

**The paragraph beginning at page 54, line 10, has been rewritten as follows:**

A16  
A block diagram of one embodiment of primary voice bureau 92 is shown in Figure 6b. According to this embodiment, primary voice bureau comprises routers 921, dual-homed

servers 922, database servers 923, call database 924, backup storage 925, call servers 926, internal switch 927, and system administrator 93. Routers 921 receive call requests via a computer network and pass them along to one of the two dual-homed servers 922. Router 921 monitors activity on servers 922 and forwards call requests to one of the two depending on availability.

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**The paragraph beginning at page 56, line 21, has been rewritten as follows:**

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Backup voice service bureau 94 receives a redundant request for voice services.

A17 Backup voice service bureau 94 processes the requests only when primary voice service bureau is offline or busy. One embodiment of backup voice service bureau 94 is shown in Figure 6c. Backup voice bureau 94 comprises routers 941, HTTP server 942, database server 943, call server 946 and routers 947. Each of these components performs a function identical to the corresponding element in primary voice bureau 92. Router 947 replaces switch 927. Communication lines 949 may replace phone lines 929. Router 947 controls the forwarding of call requests to database server 943 for queuing in an internal database, and the forwarding of call requests to call server 946 from database server 943.